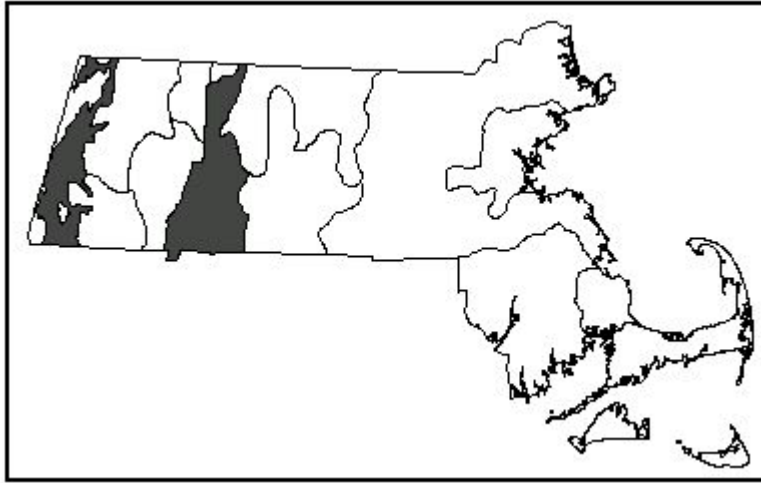


Community Name:
Community ELCODE:
SRANK:

MAJOR-RIVER FLOODPLAIN FOREST
CP1A2B1000
S2



Concept:

Silver maple-dominated forest community of alluvial floodplains of the Connecticut, Deerfield and Housatonic Rivers.

Environmental setting:

Major-river floodplain forests are known to occur along mainstem sections of large rivers, such as the Connecticut, Housatonic, and Deerfield Rivers in Massachusetts. Soils are predominantly sandy loams without soil mottles and without a surface organic layer. Flooding at these sites occurs annually and is usually severe. An island variant of major-river floodplain forests [Type I in Kearsley, 1998, 1999a] occurs on elevated sections of riverine islands and riverbanks of major rivers where there are high levels of both natural and human disturbance.

Vegetation Description:

Major-river floodplain forests have silver maple (*Acer saccharinum*) strongly dominant in the overstory, with over 60% cover, mixed with lesser amounts of cottonwood (*Populus deltoides*). American elm (*Ulmus americana*) and /or slippery elm (*U. rubra*) occur in the subcanopy. Shrubs are generally lacking. The herbaceous layer is usually dominated by a 3-6 ft. (1-2 m) tall, dense cover of wood-nettles (*Laportea canadensis*). Ostrich fern (*Matteuccia struthiopteris*) is sometimes abundant. Whitegrass (*Leersia virginica*) is consistently represented, but in low amounts, typically <5% cover. Other common associates are woodreed (*Cinna arundinacea*) and jack-in-the-pulpit (*Arisaema triphyllum*). An island variant of major-river floodplain forests [Type I in Kearsley, 1998] has similar species, but silver maple is not dominant in the overstory and the herbaceous layer is typically strongly dominated by ostrich fern. The overstory is an even mix of silver maple, cottonwood, sycamore (*Platanus occidentalis*), and American ash (*Fraxinus americana*), with box elder (*Acer negundo*) and hackberry (*Celtis occidentalis*; on the Housatonic River) common in the subcanopy. Species typical of disturbed areas, such as staghorn sumac (*Rhus typhina*) and bittersweet (*Celastrus orbiculata*), are also common in this variant, as are the vines, riverbank grape (*Vitis riparia*) and Virginia creeper (*Parthenocissus quinquefolia*).

Associations:

Two associations were described in Kearsley (1999a). They are: Type I- Riverine island floodplain forests (*Acer saccharinum*-*Populus deltoides*-*Acer negundo*-*Matteuccia struthiopteris* Association), and Type II-Major-river floodplain forests (*A. saccharinum*-*P. deltoides*-*Laportea canadensis* Association).

**Habitat values for
Associated Fauna:**

Floodplain forests are insect-rich habitats that attract warblers, thrushes and other songbirds. In particular yellow-throated and warbling vireos, which like to nest in the canopies of riverside trees, are frequently observed in floodplain forest communities. Raptors such as bald eagles and red-shouldered hawks also use riverbank trees as perch sites. In spring floods, wood ducks and hooded mergansers like the shady edges of floodplain forests and the interior meander scar pools. Eastern comma butterflies feed on elm and nettles, and the shady riverbanks are patrolled by several dragonfly species such as beaked and fawn darners. Interior meander scars and sloughs function as vernal pools providing breeding habitat for many frog species, such as leopard and pickerel frogs, American toads, and mole salamanders. Floodplain forests also provide sheltered, riverside corridors for deer and migratory songbirds.

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

Associated rare plants:

MENISPERMUM CANADENSE MOONSEED - WL

Associated rare animals:

| | | |
|--------------------------|-------------------------------|----|
| CLEMMYS INSCULPTA | WOOD TURTLE | SC |
| DESMOCERUS PALLIATUS | ELDERBERRY LONG-HORNED BEETLE | SC |
| GOMPHUS FRATERNUS | MIDLAND CLUBTAIL | E |
| GOMPHUS VASTUS | COBRA CLUBTAIL | SC |
| GOMPHUS VENTRICOSUS | SKILLET CLUBTAIL | SC |
| HALIAEETUS LEUCOCEPHALUS | BALD EAGLE | E |
| NEUROCORDULIA OBSOLETA | UMBER SHADOWDRAGON | SC |
| OPHIOGOMPHUS ASPERSUS | BROOK SNAKETAIL | SC |
| OPHIOGOMPHUS CAROLUS | RIFFLE SNAKETAIL | T |
| POMATIOPSIS LAPIDARIA | RIVERBANK LOOPING SNAIL | E |
| SOMATOCHLORA CINGULATA | LAKE EMERALD | SC |
| SOMATOCHLORA ELONGATA | SKI-TAILED EMERALD | SC |
| SOMATOCHLORA GEORGIANA | COPPERY EMERALD | E |
| SOMATOCHLORA KENNEDYI | KENNEDY'S EMERALD | E |
| SOMATOCHLORA LINEARIS | MOCHA EMERALD | SC |
| STYLURUS AMNICOLA | RIVERINE CLUBTAIL | E |
| STYLURUS SCUDDERI | ZEBRA CLUBTAIL | E |
| STYLURUS SPINICEPS | A CLUBTAIL DRAGONFLY | T |

Examples with Public Access:

Fannie Stebbins, East Longmeadow; Rainbow Beach, Northampton.

Threats:

Current threats include alteration of natural hydrology through damming, loss of vegetated buffer, disturbance by trail cutting and the subsequent invasion of non-native plant species. In a 1997 statewide floodplain forest community inventory, non-native plant species were observed at all floodplain forest sites surveyed, but they appeared to be localized to areas where the canopy was opened, the herbaceous layer was cleared, and the soil was disturbed. Non-native plant species were most abundant in the island variant of major-river floodplain forests that are heavily used by campers and boaters for recreation. Japanese knotweed (*Polygonum cuspidatum*) currently poses the greatest threat to major-river floodplain forests because of its ability to spread rapidly and shade out all other herbaceous plants.

Management needs:

The natural hydrologic regime that created these special communities and their natural closed-canopy forest structure must be maintained. There are no truly effective ways to eradicate Japanese knotweed once it has established. The best way to avoid its spread is to prevent its establishment by avoiding all clearing and disturbance within floodplain forest areas, particularly on the sandier banks.

Synonyms

USNVC/TNC:

Acer saccharinum-*Populus deltoides*/*Matteuccia struthiopteris* Forest [CEGL006147].

MA [old name]:

Southern New England floodplain forest [CT2B1A0000].

ME:

Hardwood floodplain forest community.

VT:

Silver maple-ostrich fern riverine floodplain forest.

NH:

Silver maple/wood nettle-ostrich fern floodplain forest.

NY:

Floodplain forest.

CT:

Acer saccharinum-*Populus deltoides* forests; *Acer saccharinum*/ *Eupatorium rugosum* community.

RI:

Maple-sycamore floodplain forest.

Golet & Larson, 1974:

Deciduous wooded swamp (WS-1).

Author:

J. Kearsley

Date:

7/21/99